A. CLASSIFICATION OF SUBJECT MATTER

IPC7: F28F 3/08, F28F 9/00, F28D 9/00
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: F28D, F28F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCU	MENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5992510 A (KÄLLROT), 30 November 1999 (30.11.1999)	
ļ		
A	FR 859510 A (SOCIETE ANONYME DES USINES CHAUSSON), 20 December 1940 (20.12.1940)	
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A	GB 249184 A (HARRY GIBBS ET AL), 25 March 1926 (25.03.1926)	
A	US 5492171 A (KÄLLROT), 20 February 1996 (20.02.1996)	
		
V Furth	er documents are listed in the continuation of Box C. X See patent family annex	<u>. </u>

X	rurner documents are used in the conditionation of box	C.	X See patent family annex.	
* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E"	earlier application or patent but published on or after the international filing date document which may throw doubts on priority claim(s) or which is	"X"	considered novel or cannot be considered to involve an inventive	
	cited to establish the publication date of another citation or other special reason (as specified)	"Y"	step when the document is taken alone document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is	
"O"	document referring to an oral disclosure, use, exhibition or other means		combined with one or more other such documents, such combination being obvious to a person skilled in the art	
- P-	document published prior to the international filing date but later than the priority date claimed		document member of the same patent family	
Date of the actual completion of the international search		Date of mailing of the international search report		
14	January 2004		1 0 -02- 2004	
Name and mailing address of the ISA/		Authorized officer		
Swedish Patent Office				
Box 5055, S-102 42 STOCKHOLM		Annette Riedel / JA A		
Facsimile No. +46 8 666 02 86		Telephone No. + 46 8 782 25 00		

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3476178 A (W. HÄRTING), 4 November 1969 (04.11.1969)	
	(04.11.1369 <i>)</i> 	
4	US 5063995 A (FÖRSTER ET AL), 12 November 1991 (12.11.1991)	
:	1050	
	US 3444926 A (P.E.R. STÅLBERG), 20 May 1969 (20.05.1969)	
4	US 5435383 A (RAJAGOPAL), 25 July 1995 (25.07.1995)	
4	US 6161615 A (BRIEDEN ET AL), 19 December 2000 (19.12.2000)	
A	 US 5184673 A (HEDMAN ET AL), 9 February 1993	
n.	(09.02.1993)	
	·	

01/12/2003

US	5992510	A	30/11/1999	CN DE EP SE JP SE WO SE	1209199 A 69627016 D,T 0868642 A,B 0868642 T3 2000502786 T 9504586 D 9723759 A 9601728 D	24/02/1999 06/11/2003 07/10/1998 07/03/2000 00/00/0000 03/07/1997 00/00/0000
FR	859510	Α	20/12/1940	NONE		
GB	249184		25/03/1926	NONE		
US	5492171	A	20/02/1996	DE EP SE WO AT AU DE EP SE ES JP SE US WO	69117529 D,T 0561954 A,B 502254 C 9004026 A 9211501 A 152894 T 1542192 A 69219765 D,T 577639 T 0577639 T3 2103937 T 6505898 T 470302 B,C 9100858 A 5428863 A 9216139 A	11/07/1996 29/09/1993 25/09/1995 18/06/1992 09/07/1992 15/05/1997 21/10/1992 27/11/1997 15/12/1997 12/01/1994 01/10/1994 07/07/1994 17/01/1994 22/09/1992 04/07/1995 01/10/1992
US	3476178	Α	04/11/1969	DE DE GB	502040 C 1525585 A 1179772 A	07/07/1930 21/08/1969 28/01/1970
US	5063995	Α	12/11/1991	DE EP JP	3909996 A,C 0389971 A 2290494 A	04/10/1990 03/10/1990 30/11/1990
US	3444926	5 A	20/05/1969	NON	- - 	
บร	5435383	3 A	25/07/1995	NON	E 	
US	616161	5 A	19/12/2000	DE DE EP ES JP WO	19722074 A 59800230 D 0928405 A,B 2150815 T 2001526765 T 9854527 A	03/12/1998 00/00/0000 14/07/1999 01/12/2000 18/12/2001 03/12/1998



national application No.

01/12/2003 | PCT/SE 2003/001686

US	5184673	A .	09/02/1993	AT BR DE EP ES SE SE WO	94108 T 9007308 A 69003241 D,T 0470200 A,B 2045920 T 462763 B,C 8901553 A 9013394 A	15/09/1993 24/03/1992 21/04/1994 12/02/1992 16/01/1994 27/08/1990 27/08/1990 15/11/1990
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